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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,718	12/12/2000	Stephen Ma	2705-93	5593
20575	7590	07/27/2005	EXAMINER	
MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			HO, DUC CHI	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/735,718

Applicant(s)

MA ET AL.

Examiner

Duc C. Ho

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-10,14,15 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 2-4,11-13 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5-19-05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 5, 6, 9, 10, 14-15, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in figure 2 of the instant application, in view of Partridge et al. (US 6,160,811), hereinafter referred to as Partridge.

Regarding claim 1, the admitted prior art in figure 2 of the instant application discloses a high-level block diagram of a Network Access Server.

*using a first processor (the FE 58-fig.2 per perform traditional routing tasks for the received packet , see the disclosure of the instant application at page 10, lines 11-15) in the network access server to perform a routing table lookup for a received packet;*

The admitted prior art in figure 2, however, does not disclose expressly (1) determining, from the result of the routing table lookup, a routing table identifier and a second processor responsible for processing the received packet, the second processor selected from a plurality of forwarding processor in the network access server, (2) passing the identifier and the received packet to the second processor, and (3) the second processor determines the location of the routing information in the routing table.

Partridge discloses a data packet router. The network processor 39-fig. 1 determines which forwarding engine (FE 33-35) is to read headers of packet coming into a TSU, (i.e., TSU 32), from the outside world, to update the header for transmission out of the router, and sent to the selected forwarding engine the packet. The forwarding engine determines the data link through which the packet should be sent next, see col. 3-line 52 to col. 4-line 51 (corresponding to 1-3).

One skill in the art would recognize the advantage of using at least a forwarding engine (a second processor) for processing the packets out of the router by examining a header of the routing table identifier without being concerned about the protocols of outgoing data link in order to improve the speed of a router's operation.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine figure 2 of the admitted prior art with at least a forwarding engine (a second processor) of Partridge.

The suggestion/motivation for doing so would have been to improve greatly the speed of a router's operation.

Therefore, it would have been obvious to combine Partridge with the admitted prior art in figure 2 of the instant application to obtain the invention as specified in claim 1.

Regarding claims 5, and 19, the APA in fig. 2 discloses the FE58-fig. 2 performing packet-by-packet forwarding based on packet header fields above layer 2, and send the packet to the egress port or the second processor of Partridge as instructed by the encapsulated header.

Regarding claims 6, and 20, please see the rejection of claim 1. A layer-2 Ethernet header is encapsulated to the incoming packet from the module of the APA in figure 2 before passing the packet to the second processor or the forwarding engine of Partridge for routing the packet.

Regarding claim 9, the APA in figure 2 shows a multiple ingress port 48s, one egress port 62, and an engine 58 functioning as a distribution engine to perform routing searches for data packets.

The APA, however, does not expressly disclose a plurality of forwarding engines to process data packets.

Partridge discloses a data packet router. The network processor 39-fig. 1 determines which forwarding engine (FE 33-35) is to read headers of packet coming into a TSU, (i.e., TSU 32), from the outside world, to update the header for transmission out of the router, and sent to the selected forwarding engine the packet. The forwarding engine determines the data link through which the packet should be sent next, see col. 3-line 52 to col. 4-line 51 (corresponding to 1-3).

One skill in the art would recognize the advantage of using at least a forwarding engine (a second processor) for processing the packets out of the router by examining a header of the routing table identifier without being concerned about the protocols of outgoing data link in order to improve the speed of a router's operation.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine figure 2 of the APA with at least a forwarding engine (a second processor) of Partridge.

The suggestion/motivation for doing so would have been to improve greatly the speed of a router's operation.

Therefore, it would have been obvious to combine Partridge with the APA in figure 2 of the instant application to obtain the invention as specified in claim 9.

Regarding claim 10, the APA discloses a controller 55-fig. 2 to manage access sessions associated with the ingress ports.

Regarding claim 14, this claims has similar limitations as claim 9. Therefore, it is rejected under APA in figure 2-Partridge for the same reasons set forth in the rejection of claim 9.

Regarding claim 15, this claims has similar limitations as claim 1. Therefore, it is rejected under APA in figure 2-Partridge for the same reasons set forth in the rejection of claim 1.

4. Claims 7-8, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in figure 2 of the instant application, in view of Partridge, and further in view of Bakke et al. (US 5,566,170-in IDS record), hereinafter referred to as Bakke.

Regarding claims 7, and 21, the APA and Partridge disclose all claimed limitation, except the first processor passing a processing indication to the second processor, the processing indication informing the second processor as to what processing remains to be done on the packet.

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Bakke discloses method and apparatus for accelerated packet forwarding. In Bakke the preprocessor 104-fig. 2 includes an identifier and a modifier device 126-fig. 2. The modifier device is coupled to the identifier to perform necessary modifications to the media header, see col. 5, lines 1-11.

One skill in the art would recognize the advantage of using a modifier device coupled to the identifier for performing necessary modification to the media header, such that subsequent processing of the packet is reduced.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the APA and Partridge with the modifier device coupling to the identifier of Bakke.

The suggestion/motivation for doing so would have been to reduce the subsequent processing for the received packet, and thereby improve the performance of a router's operation.

Therefore, it would have been obvious to combine the APA in figure 2 of the instant application and Partridge with Bakke to obtain the invention as specified in claim 7.

Regarding claims 8, and 22, please see the rejection of claim 7. The modified device coupled to the identifier is capable of indicating a port that another processor should route the data in the received packet to.

***Allowable Subject Matter***

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5. Claim 2, 3-4, 11-13, and 16-18 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Duc Ho

7-22-05

